



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/674,165 | 09/29/2003 | Louis J. Serrano | 03-1112 1496.00322 | 1909 |
| 24319 | 7590 | 06/08/2006 | EXAMINER | |
| LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 MILPITAS, CA 95035 | | | LUU, AN T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2816 | |

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,165

Applicant(s)

SERRANO ET AL.

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 2 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations “*a second loop filter*”, claim 7 and “*a phase circuit*”, claim 9, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 11 is objected to because of the following informalities: There appears to be typographical error in dependency of claim 11. For examination purpose, claim 11 is considered to be dependent on claim 10. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-7, 9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, the limitation “*said third mode*”, lines 3-4, lacks antecedent basis.

In claim 9, the limitation “*said output signal*”, lines 4, lacks antecedent basis.

In claim 15, the limitation “*a third mode*”, lines 8-9, does not have a clear antecedent basis since there is no recitation of a second mode.

As to claim 7, it appears to be misdescriptive since there is no distinction between “a first loop filter” and “a second loop filter”. In fact, they appear referring to the same loop filter 104.

As to claim 9, the limitation “a phase circuit” appears referring to “a detecting circuit” of claim 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 5, 9-11 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by the Dalmia reference (US Patent 6,075,416).

Dalmia discloses in figure 1 an apparatus comprising a clock generation circuit 12 configured to generate an output clock signal (i.e., output of 12) in response to a control signal (i.e., output of 20); a detect circuit 16 configured to generate a detect signal in response to said output clock signal (i.e., via divider 14) and an input signal (REFCLK_IN); and a select circuit 20 configured to generate said control signal by selecting a first input (i.e., output of 22) when in a first mode, said detect signal when in a second mode, wherein said first and second mode are selected in response to a selection signal LCC as required by claim 1.

As to claim 3, the limitations “a read mode” and “a wobble mode” are seen as “intended use” (i.e., labeling modes), which is not given patentable weight.

As to claim 5, figure 1 discloses the clock generation circuit comprising a loop filter 18 and a VCO 12.

As to claim 9, as best understood, REFCLK_IN of figure 1 is seen as a *second control signal*.

As to claims 10-11, the scopes of these claims are similar to that of claims 1 and 3. Therefore, they are rejected for the same reasons set forth above.

As to claim 15, as best understood, it is rejected for reciting method/steps derived from the apparatus of claim 1 as noted above.

7. Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by the Chu et al reference (US Patent 6,285,225).

Art Unit: 2816

Chu discloses in figure 1 an apparatus comprising a clock generation circuit 11 configured to generate an output clock signal DCLK in response to a first control signal VCON; and a phase circuit (13 and 15) configured to generate a phase error signal (UP/DOWN) in response to the output signal and a second control signal RCLK as required by claim 10.

As to claim 11, the limitations “a read mode” and “a wobble mode” are seen as “intended use” (i.e., labeling modes), which is not given patentable weight.

As to claim 12, figure 1 discloses a variable circuit 11 configured to delay said output clock signal in response to said phase error.

As to claim 13, figure 3 and 6 disclose detail of the phase circuit comprising a phase select circuit 37; a first and second integration circuit (33 and 35), each configured to present phase signals; and computing circuit 15 (fig. 6) configured to generate a phase calculation signal VCON in response to said phases signals.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Dalmia reference (US Patent 6,075,416) in view of the Wang reference (US Patent 6,404,247).

Dalmia discloses all the claimed invention except for specifically teaching if its clock generation circuit is digital or analog as required by claims 4 and 8. However, it is well known in the art that a clock generation circuit can be implemented in can be classified, based on its

Art Unit: 2816

method of implementation, into three main types: analog, mixed digital/analog, and all digital (See Wang) wherein each type has its own trade-off advantages/disadvantages. Thus, it would have been obvious to one skilled in the art at the time the invention was made to employ one of any type of clock generation circuit as disclosed above to meet the requirements of a particular application.

Allowable Subject Matter

10. Claims 2 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 6-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus comprising elements being configured as recited in claims. Specifically, none of the prior art teaches the limitations:

- A second input when either said first input or said detect signal are not present as required by claim 2.
- Clock generation circuit operates in a third mode as required by claim 6.
- A second loop filter as required in claim 7. And,
- The phase select circuit generates said phase error signal in response to said phase calculation signal as required by claim 14.

Art Unit: 2816

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

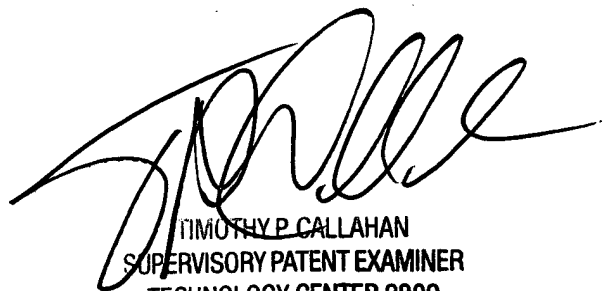
Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu

5-20-06 *ATL*


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800